Veterans Affairs
Medical Center
Durham, North Carolina

Duke University
Medical Center

Research Update

Institute for Clinical and Epidemiological Research

Volume V, No. 1 | A Veterans Affairs Center of Excellence | Spring 2002

Tulsky to Receive Presidential Award

From the Director ...

We are proud to announce that James Tulsky, M.D., Director of the Program on the Medical Encounter and Palliative Care at the Durham VA Medical Center, was recently awarded the prestigious Presidential Early Career Award for Scientists and Engineers (PECASE) for excellence in research. This national award, conferred by the White House Committee on Science and Technology, recognizes investigators who have achieved the highest degree of scientific productivity at an early stage in their career. Dr. Tulsky is a national leader in the area of patient-physician communication as it relates to patients who are nearing the end of life. His studies have shown us how to better communicate with our patients at this very difficult time in ways that instill dignity and compassion for the patient, their families, and ourselves. He has designed novel instruments that have helped us better understand the unique needs of patients and their loved ones, and he has shown how educational interventions can allow us to improve our clinical skills in this area. Dr. Tulsky was chosen for this award from among a national group of scientist that included medical researchers, rehabilitation researchers and health services researchers. We are all pleased with Dr. Tulsky's excellent work and are happy with the national attention that this award brings to Dr. Tulsky, his and his excellent team's research efforts, and to the wider influence of health service research in the larger scientific community.

Eugene Z. Oddone, M.D., M.H.S.

The PECASE award is the highest honor bestowed by the United States government on scientists and engineers beginning their independent careers. It recognizes outstanding scientists and engineers who, early in their careers, show exceptional potential for leadership at the frontiers of knowledge. The award is given out once a year to approximately 60 scientists by the President's Office of Science and Technology Policy. Eight Federal departments and agencies join together annually to nominate the most meritorious young scientists and engineers who will broadly advance the science and technology that will be of the greatest benefit to fulfilling the agencies' missions. These agencies include the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Veterans Affairs, the National Aeronautics and Space Administration, and the National Science Foundation.

Each year, the Department of Veterans Affairs is invited to submit two nominees selected from its Research Career Development Program, which is a competitive mentored program for clinical researchers interested in develop-ing their research careers at the VA. Nominees are selected based on an internal review of the most promising and productive Career Development awardees. The review is conducted by senior representatives from the VA's medical, health services, and rehabilitation research services.

James A. Tulsky, MD

The reviewers recognized, "though a recent graduate of the VA's Health Services Research and Development Career Development Program and a fully independent investigator for less than a year, Dr. Tulsky's work has appeared in high-quality journals, including *JAMA* and *The New England Journal of Medicine*." It was also noted that on July 17, 2000, Dr. Tulsky testified before a Senate

Continued on Page 2

Special Committee on Aging hearing on the end of life, and spoke about professional education issues and the research programs at the VA and the Duke Institute on Care at the End of Life, at which he serves as associate director. It is also recognized that Dr. Tulsky "is establishing a national reputation as an expert in medical ethics and improving the care of dying patients" and, being involved in the palliative care of veterans, "has chosen to pursue an important and difficult area of research. In seeking to understand how health care providers and terminally ill patients and their families communicate about care, care preferences, and patients needs near the end of life, Dr. Tulsky's work promises to improve end-of-life for not only veterans, but for all terminally ill patients."

The nomination recognizes the unique contributions Dr. Tulsky has made in his work on physician-patient communication and the care of dying patients. The nomination states that, "He has identified difficulties in communication at the end of life, and created interventions to improve its quality." Dr. Tulsky and his research team have demonstrated the importance of multiple domains of experience as patients face death, including less frequently noted areas such as preparation and contributing to others. These findings reveal that there is no one definition of a good death, and that wide disagreement exists about the importance of such issues as dying at home and the use of life-sustaining treatments. These data contribute significantly to efforts to improve measurement of the quality of care at the end of life.

Being nominated for this award is a source of immense pride and satisfaction for Dr. Tulsky. But most of the pride and satisfaction extends to his research team. "It makes me proud, very, very proud of what we do here and the people I work with, that I'm able to receive this," says Dr. Tulsky. "The first thing I thought [upon learning he was receiving the award] was how much I recognize this as a team effort and how lucky I am to be part of such an amazing group of people. It is a privilege to be able to do this work which is so personally meaningful."

"I think we've achieved a fair amount of success in this particular domain," says Dr. Tulsky. He also believes that "what we do is a little odd, and somewhat off the beaten track, particularly our studies in physician-patient communication." However, he thinks the work stands out for its creativity and receives more recognition.

"It makes me proud of the VA for recognizing the value of this research," said Dr. Tulsky. "It also makes me proud to be part of the VA."

Diabetes Mellitus Screening

Four years ago, David Edelman, M.D., and his research team began an observational study of veterans at high risk of diabetes mellitus. The study set out to calculate the prevalence of undiagnosed diabetes and incidents of diabetes in veterans.

Now, much of the study is complete. Dr. Edelman's and his colleagues' objective was "to estimate the prevalence and assess the severity of unrecognized diabetes in the setting of opportunistic screening among medical center outpatients." The study, reported in the January issue of the *Journal of General Internal Medicine**, drew on 1,253 outpatients from the Durham VA Medical Center, between the ages of 45 and 64, without recognized diabetes. The authors found unrecognized diabetes in 4.5% of the study patient population. "That prevalence is roughly the same as you would expect in a similar age group in the general population," said Dr. Edelman. "And that's interesting because you might think that patients who have contact with a medical center would be less likely than the general population to have an unrecognized medical condition."

David Edelman, MD

The authors also noted that "While the prevalence of unrecognized diabetes in our clinic population was similar to that found in the community, the frequency of co-morbid illness was higher in our cohort than in the community," such as pre-existing hypertension.

The study concluded: "The majority of these patients with diabetes diagnosed at screening have disease severe enough that they can potentially benefit from the diagnosis by altered treatment of diabetes or more intense treatment of hypertension or hyperlipidemia."

Dr. Edelman also found that the three risk factors for diabetes are reliable predictors for undiagnosed diabetes. The risk factors are 1) a diagnosis of hypertension, 2) obesity, and 3) a family history of diabetes. "Although non-white race is a predictor of diabetes, we saw no effect of race of unrecognized diabetes," said Dr. Edelman.

"What was exciting about the three reliable risk factors was how dramatic the effect was. We had one patient in the entire study who had unrecognized diabetes without any of those risk factors. The risk for unrecognized diabetes in patients without risk factors was about one-half of one percent," said Dr. Edelman. "It was about 10% for patients with all three risk factors. That's a fairly dramatic variation and if you're going to implement any kind of diabetes screening policy, it has major implications for who you're going to test and who you are not. You can reduce your screening population just by eliminating patients with no risk factors."

The study reported other important findings as well. It found that "undiagnosed diabetes is unrelated to whether patients are receiving primary care," suggesting that primary care providers are not systematically screening their patients for diabetes. This came as a surprise. "I would have imagined that more patients not getting primary care would have had unrecognized diabetes and that wasn't true," said Dr. Edelman.

Another important finding was the lack of race as a risk factor. "I would have expected, consistent with other epidemiological studies, that African Americans would have a much higher rate of unrecognized diabetes, but we didn't find that," said Dr. Edelman. "If the difference in the studies is real, it may be because physicians at the Durham VA Medical Center are aware of the increased risk for diabetes among African Americans and are therefore more aggressive in seeking out the diagnosis."

Dr. Edelman and his colleagues want to examine the broader

*Edelman D, Edwards LJ, Olsen MK, Dudley TK, Harris AC, Blackwell DK, Oddone EZ. "Screening for Diabetes in an Outpatient Clinic Population" Journal of General Internal Medicine 2002, Jan,; 17:23-28.

implications for a diagnosis of diabetes as well. "Another issue we wanted to examine was what it means for the patient to be told they have a diagnosis of diabetes. Does it change the patient's quality of life, and if so, how? Does a patient get depressed upon being told he or she has diabetes? What kind of care do patients diagnosed at screening get? We know the answers to some of these questions, others we're still analyzing, and others we're waiting for the long-term follow-up data. These are data we'll bring forward later."

The authors concluded that diabetes screening may or may not be an effective intervention. However, "opportunistic screening for diabetes may be the preferred method for screening, as there is substantial potential for case-finding in a medical center outpatient setting."

HIV, Hepatitis C, and Hepatitis B Risks of Veterans with Severe Mental Illness

Four years ago Marian Butterfield, M.D., M.P.H., and Keith Meador, M.D., M.P.H., became part of a study that set out to determine the prevalence of human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV) among people with severe mental illness (SMI). Drs. Butterfield's and Meador's portion of the study, "HIV Sero-Prevalance and Risks in Veterans with Severe Mental Illness," was linked to a four-site collaborative study sponsored by the National Institute of Mental Health's Office on AIDS titled "Assessing HIV/AIDS and Associated Health Risks in People with Severe Mental Illness."

Now, both the NIMH and Drs. Butterfield and Meador parts of the study are completed. A portion of the study's results, published in the January 2001 issue of the *American Journal of Public Health*[*], "indicate that patients with severe mental illness, in comparison with estimates for the overall U.S. population, exhibit elevations in prevalence of HIV, HBV, and HCV." There were 931 severely mentally ill patients that took part in the study. Three-point-one percent, or about eight times the general population rate were found to be infected with HIV. For those with HBV, 23.4% or about five times the general rate of the population were found to be infected. And for HCV, 19.6% or about eleven times the general rate of the population were found to be infected.

Mimi Butterfield, MD

The study found that, in general, the risk factors for infection among people with severe mental illness are very similar to the risk factors for the general population. The authors report that, "Elevated rates within several risk categories may reflect the poverty, risky environments, an overall poor health and medical care common in people with severe mental illness."

Continued on Back Page

[*]Rosenberg SD, Goodman LA, Osher FC, Swartz MS, Essock SM, BUTTERFIELD MI, Constantine NT, Wolford GL, Salyers MP. "Prevalence of HIV, Hepatitis B, and Hepatitis C in People With Severe Mental Illness" American Journal of Public Health 2001; 91(1):31-37.

Career Opportunity

Epidemiologic Research & Information Center
Durham, NC

Director, Veterans Affairs Epidemiologic Research and Information Center Veterans Affairs Medical Center, Durham, NC

The Department of Veterans Affairs (DVA) Epidemiologic Research and Information Center (ERIC), located in Durham, NC, is seeking a Director. The ideal candidate will have a doctorate in epidemiology and substantial research and administrative experience. The successful candidate will also be qualified for a faculty appointment in the Department of Epidemiology within the School of Public Health at the University of North Carolina (UNC) at Chapel Hill, and/or with the Department of Medicine, Duke University Medical Center.

The ERIC in Durham, NC is one of three national centers for epidemiology research in DVA and has a vigorous research program with over $1 million in funding in fiscal year 2001. The Durham ERIC serves as a national resource for the DVA and is seeking a director to expand the center into health interventions, pharmacologic, and medical device epidemiology by capitalizing on the unique databases available within DVA. The ERIC coordinates a substantial research portfolio involving investigators nationally. In addition, it has an innovative education program for training VA investigators in epidemiological methods that is conducted in close collaboration with UNC.

Women and minority candidates are encouraged to apply. U.S. citizenship is a requirement for employment. For additional information, contact Beth Armstrong at 919-286-6936 or beth.armstrong@duke.edu. Submit letter of interest and curriculum vitae to:

Morris Weinberger, PhD
Chair, Search Committee
Center for Health Services Research in Primary Care
VA Medical Center (152)
508 Fulton Street
Durham, NC 27705
Email: mweinber@email.unc.edu
Phone: 919-966-7385 or 919-286-6936
Fax: 919-966-6961

Please visit the following Web sites for additional information: http://hsrd.durham.med.va.gov/ or http://www.usajobs.opm.gov/wfjic/jobs/IZ8374.htm

The Department of Veterans Affairs is an Equal Opportunity/Affirmative Action employer

Of particular concern is the high rate of HVC infection, a condition that often goes undetected. "Individuals with HCV infection commonly fail to receive appropriate treatment to limit liver damage and unknowingly may be a source of infection to others," the study concluded.

Though this study did not determine the manner in which these viruses spread, it stated that high rates of substance abuse was the likely contributing factor. It concluded that substance abuse, particularly injection drug use "increased risk of all three infections anywhere from 2.2-fold to more than 31-fold, with HCV showing the greatest drug-related risk."

Dr. Butterfield's interest was in the gender analysis of the study and decided to investigate gender and racial risk factor differences associated with HCV infection, drawing her data from the larger study's data set. "People in the study were defining what their particular interests would be in taking a lead on writing a particular portion of the final results," said Dr. Butterfield. "From the beginning I hoped to do the gender analysis in rates of infection and risks because of my interest on gender and its impact on health and behaviors and gender roles and how that puts men and women at different risk for particular health problems."

For gender differences, Dr. Butterfield and her colleagues examined a study population, not all veterans, of 777 individuals, 251 women and 526 men, all of who were diagnosed as having severe mental illness. "We expected the HIV rate to be higher than it was, so the lower rate was good news." In addition to finding HIV rates lower than expected, the study found that HIV risk behaviors for men and women were different. "Women were more likely to have had sex for drugs or higher sex risk behaviors and the men had more drug risk behaviors," said Dr. Butterfield.

"But the distressing news was the high rates of hepatitis B and C," said Dr. Butterfield. The study found that men and women with SMI are at high risk for HCV infection, with men having a two-fold higher rate of infection. Men were found to have more drug-risk behaviors, while women were found to have more sex-risk behaviors. "The higher rates of injection drug use in men accounted for the higher rates of hepatitis C in men," said Dr. Butterfield.

Despite these differences, methods of HCV transmission of infected men and women appeared the same. The authors concluded that needle sharing among intravenous drug users poses the greatest risk, while "sexual transmission plays a minor role in the overall HCV epidemiology for both genders."

There are other factors in transmission, such as a history of transfusions or tatooing, which were not assessed in this study. "We also found that crack cocaine use is an independent predictor after controlling for injection drug use for hepatitis C transmission," said Dr. Butterfield. "The whole issue of sexual transmission of hepatitis C is somewhat controversial, for it's known that it is not as efficient in sexual transmission as hepatitis B."

Dr. Butterfield and her colleagues also wanted to assess racial differences in the prevalence of, and risk for, hepatitis B and hepatitis C exclusively among military veterans with severe mental illness. Drawing on a study group of 376 veterans, 155 white and 221 black, 21.3% of all participants were found to be infected with HBV and 18.9% of all participants were found to be infected with HCV. Blacks, however, were found to have a 173% greater likelihood than whites of testing positive for HBV and a 47% greater likelihood than whites of testing positive for HCV, with intravenous drug use being an equal risk factor for transmission for both groups. "Racial differences in high-risk behaviors, especially smoking crack cocaine, accounted for the observed racial differences in rates of HCV infection," the authors concluded.

"Injection drug use and crack cocaine use were the big predictors for higher rates of hepatitis C," said Dr. Butterfield. "It may be that crack cocaine use more likely impairs judgment, and therefore leads to more risk behaviors."

"These studies highlight that veterans with severe and persistent mental illness are at very high risk for these infections. Those SMI veterans that are not infected need educational intervention on their own risk of becoming infected as well," said Dr. Butterfield. "Veterans also need educational interventions for their infection status and educational interventions on their risk of infecting others."

Dr. Butterfield points out that the VA is moving towards initiatives to warrant screening of persons with severe mental illness for hepatitis C. "There are now clinical reminders across the mental health service line in the VA to screen patients with mental illness for hepatitis C, and that's something that mental health providers clearly were not doing prior to this study's research coming out," Dr. Butterfield. "Mental health providers are going to have to become more aware, as we did with HIV, of what the risks are for these infections and the health implications because we are treating a very vulnerable patient group."

Recently Funded Projects

Study to Lower Veterans' Blood Pressure: Patient/ Physician Intervention
Principal Investigators: Eugene Z. Oddone, M.D., M.H.S., and Hayden Bosworth, Ph.D.
Funding Source: Department of Veterans Affairs, Health Services Research & Development Services, 10/2001 - 9/2005

Behavioral Insomnia Therapy in Primary Care
Principal Investigators: Jack D. Edinger, Ph.D.
Funding Source: Department of Veterans Affairs, Health Services Research & Development Services, 10/2001 - 9/2005

Research Update is published by the Health Services Research and Development Service, Department of Veterans Affairs Medical Center, Durham. For questions or comments contact Ed Cockrell, Administrative Officer, VAMC (152), 508 Fulton Street, Durham NC, 27705. Telephone: (919) 286-6936, Fax: (919) 416-5836. E-mail: COCKR001@mc.duke.edu Web Page: http://hsrd.durham.med.va.gov/ The Institute's mission is to provide quality information on issues regarding the organization, financing, and delivery of veterans' health care, and to build the epidemiological capacity of the Veterans Health Administration through the generation, synthesis, and dissemination of epidemiological information. The Institute also has a mission to educate health professionals through a spectrum of training grants in the techniques of health services and epidemiological research.